The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

Paper No. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROLAND DE LA METTRIE, JEAN COTTERET, ARNAUD DE LABBEY and MIREILLE MAUBRU

Appeal No. 2003-0615
Application No. 09/319,165

HEARD: June 11, 2003

Before PAK, OWENS, and POTEATE, *Administrative Patent Judges*

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from the final rejection of claims 25-65, which are all of the claims remaining in the application.

THE INVENTION

The appellants claim a composition for the oxidation dyeing of keratin fibers such as human hair, and claim a dyeing process which uses the composition. Claim 25, directed toward the composition, is illustrative:

> 25. A ready-to-use composition for the oxidation dyeing of keratin fibers, comprising:
>
> - at least one first oxidation base chosen from para-phenylenediamines and acid-addition salts thereof,
>
> - at least one second oxidation base chosen from para-aminophenols and acid-addition salts thereof,
>
> - at least one coupler chosen from 2-methyl-5-N-(β-hydroxyethyl)aminophenol and acid-addition salts thereof,
>
> - at least one enzyme chosen from 2-electron oxidoreductases, and
>
> - at least one donor for said at least one enzyme.

THE REFERENCES

Andrillon et al. (Andrillon)	4,065,255	Dec. 27, 1977
Tsujino et al. (Tsujino)	4,961,925	Oct. 9, 1990
Tsujino et al. (Yamahatsu)[1] (European patent application)	EP 0 716 846	Jun. 19, 1996

[1] The examiner and the appellants refer to this reference by the first word in the name of the company, Yamahatsu Sangyo Kaisha Ltd. For consistency, we likewise do so.

THE REJECTIONS

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 25-49 and 51-57 over Yamahatsu in view of Andrillon, and claims 25-65 over Andrillon in view of Tsujino.[2,3]

OPINION

We affirm the aforementioned rejections.

The appellants state that the claims stand or fall together as to each ground of rejection (brief, page 4). We therefore limit our discussion to one claim to which each rejection applies, i.e., claim 25. *See In re Ochiai*, 71 F.3d 1565, 1566 n.2, 37 USPQ2d 1127, 1129 n.2 (Fed. Cir. 1995); 37 CFR § 1.192(c)(7)(1997).

Rejection over Yamahatsu in view of Andrillon

Yamahatsu discloses a one-pack oxidation hair dye

[2] A provisional rejection of claims 25-65 under the judicially created doctrine of obviousness-type double patenting over claims 32-74 of copending application no. 09/319,204 is withdrawn in the examiner's answer (page 3) due to the entry of a terminal disclaimer.

[3] The examiner relies (answer, pages 5-6) upon a reference (book chapters) by Charles Zviak which was provided by the appellants during prosecution (request for reconsideration filed July 6, 2001, paper no. 17). Because this reference is not included in the statement of the rejection, it is not properly before us. *See In re Hoch*, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970). Accordingly, we have not considered this reference in reaching our decision.

composition comprising uricase (a dielectron reducing oxidase), uric acid or a salt thereof (a donor for the uricase), an oxidation dye, and an optional reducing agent (page 2, lines 25-29 and 37-40). The disclosed oxidation dyes include a number of para-phenylenediamines and addition salts thereof (the appellants' first oxidation base), a number of para-aminophenols and acid addition salts thereof (the appellants' second oxidation base), and 5-(2-hydroxyethylamino)-2-methylphenol (the appellants' coupler, 2-methyl-5-N-(β-hydroxyethyl)aminophenol) (page 3, lines 3-15).[4] In experiments 1 and 3-5, and examples 1, 4, 5, 7 and 9, p-phenylenediamine, p-aminophenol, uricase, and uric acid or an acid addition salt thereof are used in combination. The appellants' coupler is not used in any example, and is not among the preferred oxidation dyes (page 3, lines 21-23).

Andrillon discloses a composition for the oxidation dyeing of keratin fibers, particularly human hair, comprising 1) a coupler, which preferably is a 2-methyl-5-N-(β-hydroxyalkyl)-

[4] As pointed out by the appellants, "[t]he term 'oxidation dye' is a generic term for both oxidation dyes and couplers" (brief, page 5).

aminophenol, where the alkyl group has 1-4 carbon atoms, and 2) an oxidation dye which is a para-phenylenediamine, a para-aminophenol, or an acid addition salt of the diamine or aminophenol (col. 1, lines 7-11; col. 2, lines 18-68). In examples 12, 13 and 18, the appellants' coupler, 2-methyl-5-N-(β-hydroxyethyl)aminophenol, is used in combination with at least one para-phenylenediamine or addition salt thereof and a para-aminophenol or acid addition salt thereof. Andrillon teaches that colors are accurately reproducible because of the very great stability characteristics of the coupler, particularly in an ammoniacal dye composition solution (col. 3, lines 7-10), and that when the coupler is combined with both a para-phenylenediamine and a para-aminophenol, a whole range of shades can be obtained depending on the choice of the para-phenylenediamine or para-aminophenol (col. 3, lines 16-21). Andrillon does not disclose an enzyme. Instead, Andrillon uses in his examples a conventional oxidizing agent such as hydrogen peroxide or an aqueous solution of urea peroxide (col. 10, lines 8-12).

The appellants argue that only 0.59% of the possible combinations of Yamahatsu's oxidation dyes produce the appellants' claimed invention and, because of this low probability, there is no suggestion in Yamahatsu to select one of these combinations (brief, pages 5-10). Regarding Yamahatsu's examples in which para-phenylenediamine and para-aminophenol oxidation dyes (the appellants's first and second oxidation bases) are used in combination, the appellants argue that a third oxidation dye other than Yamahatsu's 2-methyl-5-N-(β-hydroxyethyl)aminophenol is used in these examples and, therefore, Yamahatsu would have suggested using a para-phenylenediamine and a para-aminophenol in combination with a dye other than 2-methyl-5-N-(β-hydroxyethyl)-aminophenol (brief, page 8). The appellants do not point out any oxidation dye combination other than those in the examples which the appellants consider to have been fairly suggested to one of ordinary skill in the art by Yamahatsu. Thus, the appellants apparently consider Yamahatsu's suggested oxidation dye combinations to be only those in the examples.

The oxidation dye combinations which Yamahatsu would have fairly suggested to one of ordinary skill in the art, however, are not limited to those in the examples. *See In re Fracalossi*, 681 F.2d 792, 794 n.1, 215 USPQ 569, 570 n.1 (CCPA 1982); *In re Mills*, 470 F.2d 649, 651, 176 USPQ 196, 198 (CCPA 1972). Yamahatsu's teaching that all of the disclosed oxidation dyes are suitable, and the indication in the examples that the oxidation dyes are useful in combination, would have fairly suggested, to one of ordinary skill in the art, use of any combination of the disclosed oxidation dyes.[5] The fact that many combinations of the disclosed oxidation dyes are possible would not have made any of them less obvious, particularly where, as here, the oxidation dyes recited in the appellants' claim are used for the identical purpose taught by the reference. *See Merck & Co. v. Biocraft*

[5] The appellants argue that according to this reasoning, no composition containing any combination of Yamahatsu's oxidation dyes would be patentable because they all would be obvious variants of each other (reply brief, pages 5-6). All of the combinations would have been *prima facie* obvious to one of ordinary skill in the art. A showing of *prima facie* obviousness can be overcome by evidence of secondary considerations, but the appellants have not provided such evidence. *See In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); *In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984); *In re Reuter*, 651 F.2d 751, 757, 210 USPQ 249, 254-5 (CCPA 1981); *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976).

Labs., 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989).

Moreover, Andrillon's teaching that the disclosed coupler, which preferably is a 2-methyl-5-N-(β-hydroxyalkyl)aminophenol, where the alkyl group has 1-4 carbon atoms, has very great stability characteristics and, when used in combination with para-phenylenediamines and para-aminophenols, produces a whole range of shades (col. 3, lines 7-21), would have fairly suggested, to one of ordinary skill in the art, selection of 2-methyl-5-N-(β-hydroxyalkyl)aminophenol, a para-phenylene-diamine and a para-aminophenol, in combination, in Yamahatsu's dye composition to obtain these benefits.[6]

The appellants argue that the benefits disclosed by Andrillon of this coupler/oxidation dye combination are relative only to the prior art 2-methyl-5-aminophenol coupler mentioned by Andrillon (col. 1, lines 44-46), which is not among the oxidation dyes disclosed by Yamahatsu (brief, pages 9-10). We do not find in Andrillon a teaching that the disclosed benefits of the coupler are limited to a comparison with the prior art 2-methyl-5-aminophenol coupler. Instead, Andrillon indicates that good

[6] Andrillon does not indicate that these benefits are limited to use of the coupler/oxidation dye combination with any particular oxidizing agent, e.g., peroxides or enzymes.

color stability to washing, light and weather is a characteristic of the coupler (col. 3, lines 4-10). Hence, Andrillon would have fairly suggested, to one of ordinary skill in the art, obtaining color stability in Yamahatsu's dye composition by using, in combination, 2-methyl-5-N-(β-hydroxyalkyl)aminophenol, a para-phenylenediamine and a para-aminophenol.

For the above reasons we conclude that the appellants' claimed invention would have been obvious to one of ordinary skill in the art over Yamahatsu in view of Andrillon.

Rejection over Andrillon in view of Tsujino

Tsujino discloses a hair dye composition comprising a dielectron reducing oxidase enzyme, a donor for the enzyme, and an ordinary oxidation dye (col. 1, lines 49-54; col. 2, lines 4-10 and 45-46). The disclosed oxidation dyes include a number of para-phenylenediamines and addition salts thereof (the appellants' first oxidation base), a number of para-aminophenols and acid addition salts thereof (the appellants' second oxidation base), and 5-(2-hydroxyethylamino)-2-methylphenol (the appellants' coupler, 2-methyl-5-N-(β-hydroxyethyl)aminophenol)

(col. 2, line 50 - col. 3, line 2). In Tsujino's examples 5 and 7 the appellants' first, second, fourth and fifth components are used in combination. Tsujino does not use the appellants' coupler in any of the examples.

For the reasons given above regarding Yamahatsu, the appellants' claimed invention would have been *prima facie* obvious to one of ordinary skill in the art over Tsujino.

Moreover, Tsujino teaches that when hydrogen peroxide is used as an oxidizing agent in a hair dye composition, "damage of hair to some degree is inevitable and also skin trouble might be caused depending on the user" (col. 3, lines 19-21). Tsujino also teaches that "[a]ccording to the present invention, a good finish of hair can be obtained while retaining almost the same dyeing effect as that by using hydrogen peroxide as the oxidizing agent" (col. 5, lines 43-46). These teachings would have fairly suggested, to one of ordinary skill in the art, substitution of Tsujino's enzyme/donor for Andrillon's hydrogen peroxide to provide good hair finish and to reduce the likelihood of hair and

skin damage.[7] Such a substitution would produce the appellants' claimed invention.

The appellants point out that Tsujino teaches that there is a tradeoff between dyeing properties and other properties, and argue that there is no evidence of record that if Andrillon's hydrogen peroxide were replaced by Tsujino's enzyme, the improvement in other properties would outweigh the resulting reduction in dyeing properties (brief, pages 12-22).

In support of this argument the appellants rely upon *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 53 USPQ2d 1580 (Fed. Cir. 2000), wherein the Federal Circuit held that the district court did not clearly err in finding that one of ordinary skill in the art would not have reasonably elected trading the benefit of security of a dead bolt lock on an automobile steering wheel anti-theft device for the convenience of a self-locking ratcheting mechanism. *Winner*, 202 F.3d at 1349, 53 USPQ2d at 1587. It is significant that the Federal Circuit did not consider the district court to be in error in finding that the

[7] The appellants argue that "no evidence of record indicates the particular compositions of Andrillon will cause either hair damage or skin damage" (brief, pages 17-18). That evidence is provided by Tsujino, who indicates that hydrogen peroxide inevitably causes hair damage to some degree (col. 3, lines 18-21).

primary reference, which disclosed a dead bolt lock, taught away from the ratcheting mechanism of the secondary reference.[8] *Winner*, 202 F.3d at 1350, 53 USPQ2d at 1588. The Federal Circuit stated: "Trade-offs often concern what is feasible, not what is, on balance, desirable. Motivation to combine requires the latter." *Winner*, 202 F.3d at 1349, 53 USPQ2d at 1587. Then, in a footnote, the court stated: "The fact that the motivating benefit comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another." *Winner*, 202 F.3d at 1349 n.8, 53 USPQ2d at 1587 n.8.

In accord with *Winner*, the improved hair finish and reduced likelihood of skin and hair damage provided by using Tsujino's enzyme instead of peroxide must be balanced against any resulting loss of hair dyeing effect.

Tsujino states that when hydrogen peroxide is used, "damage of hair to some degree is inevitable and also skin trouble might

[8] The present case differs significantly from *Winner* in that Andrillon does not teach against using Tsujino's enzyme. Andrillon's hydrogen peroxide is merely a conventional oxidizing agent used in the examples (col. 10, lines 8-12).

be caused depending on the user" (col. 3, lines 19-21). Tsujino also states that "the method utilizing hydrogen peroxide as the oxidizing agent is excellent in the dyeing properties, but poor in the finish of hair" (col. 5, lines 39-42). Hence, Tsujino indicates that use of hydrogen peroxide produces poor hair finish, causes hair damage, and may cause skin trouble, but provides an excellent dyeing effect.

Regarding the use of Tsujino's enzyme, Tsujino teaches that "since oxygen in air is activated and utilized, hair damage and skin trouble are less occurred and also the same dyeing and bleaching effects as that by the conventional method may be imparted" (col. 3, lines 22-25). Tsujino also teaches when the enzyme is used, "a good finish of hair can be obtained while retaining almost the same dyeing effect as that by using hydrogen peroxide as the oxidizing agent" (col. 5, lines 43-46). Thus, Tsujino indicates that use of the enzyme produces good hair finish, reduces the likelihood of hair damage and skin trouble, and produces dyeing and bleaching effects which are the same or almost the same as those obtained using hydrogen peroxide.

Tsujino's table 1 shows that in the two experiments in which hydrogen peroxide is used (1-12 and 1-13) the dyeing effect rating is the best rating ("thick dark brown color") and the finish of hair rating is the worst rating ("softness is lost and also combing is inferior") (col. 4, lines 48-59). In the examples in which the enzyme is used the dyeing effect rating is the best rating ("thick dark brown color") in seven of the examples, (1-3 and 1-5 to 1-10), the second rating ("dark brown color") in two of the examples (1-2 and 1-4), and the third rating ("shallow dark brown color") in one example (1-1). In all examples in which the enzyme is used the finish of hair rating is the best rating ("soft and combing is smooth"). Thus, Tsujino' table 1 indicates that when the enzyme is used instead of hydrogen peroxide, the finish of hair is better in all cases, and the dyeing effect is the same in most cases, but is thinner or shallower in a minority of cases.

When one of ordinary skill in the art who, like Tsujino, desired good hair finish and reduced likelihood of hair and skin damage, weighed the above-discussed benefits and disadvantage of using Tsujino's enzyme instead of hydrogen peroxide, the person

of ordinary skill in the art would been led to use the enzyme to obtain good hair finish and reduced likelihood of hair and skin damage in every case at the expense of reduced dyeing thickness or depth in a minority of cases. Consequently, Tsujino would have fairly suggested, to such a person of ordinary skill in the art, replacing Andrillon's hydrogen peroxide with Tsujino's enzyme.

Accordingly, we conclude that the appellants' claimed invention would have been obvious to one of ordinary skill in the art over Andrillon in view of Tsujino.

DECISION

The rejections under 35 U.S.C. § 103 of claims 25-49 and 51-57 over Yamahatsu in view of Andrillon, and claims 25-65 over Andrillon in view of Tsujino, are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

CHUNG K. PAK)
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